

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A computer readable medium encoded with a set of executable instructions to perform a method for distributing information via common communication channels connecting a plurality of devices, the set of executable instructions comprising:

(a) a family construction module for constructing a family of related devices that is a subset of the plurality of devices connected via the common communication channels, each device storing information and being capable of communicating to at least one other device in the family via the common communication channels;

(b) a publication module for publishing information via the common communication channels to those devices in the family who have subscribed to the information; and

(c) a subscription module for subscribing to information stored by the related devices of the family.

2. The computer readable medium of Claim 1, wherein for at least one device connected to the common communication channels, the family construction module constructs at least one immediate family of devices directly known by said device.

3. The computer readable medium of Claim 2, wherein for said at least one device connected to the common communication channels, the family construction module constructs at least one extended family of devices which is once removed from said device, and wherein the extended family of devices once removed is directly known by at least one device in the immediate family of devices.

4. The computer readable medium of Claim 3, wherein for said at least one device connected to the common communication channels, the family construction module constructs at least one extended family of devices which is twice removed from said device, and wherein the extended family of devices twice removed is directly known by at least one device in the extended family of devices once removed.

5. The computer readable medium of Claim 3, wherein for said at least one device connected to the common communication channels, the family construction module constructs at least one extended family of devices which is  $n^{\text{th}}$  removed from said device, wherein the extended family of devices  $n^{\text{th}}$  removed is directly known by at least one device in an extended family of devices which is  $n^{\text{th}}-1$  removed from said device.

6. The computer readable medium of Claim 2, wherein for each of a plurality of devices connected to the common communication channels, the family construction module constructs at least one immediate family of devices directly known by the device connected to the common communication channels.

7. The computer readable medium of Claim 6, wherein for each of a plurality of devices connected to the common communication channels, the family construction module constructs at least one extended family of devices which is once removed from the device, wherein the extended family of devices once removed is directly known by at least one other device in the immediate family of the device connected to the common communication channels.

8. The computer readable medium of Claim 7, wherein for each of a plurality of devices connected to the common communication channels, the family construction module constructs at least one extended family of devices which is twice removed from the device, wherein the extended family of devices twice removed is directly known by at least one other device in the extended family once removed from the device connected to the common communication channels.

9. The computer readable medium of Claim 7, wherein for each of a plurality of devices connected to the common communication channels, the family construction module constructs at least one extended family of devices which is  $n^{\text{th}}$  removed from the device, wherein the extended family of devices  $n^{\text{th}}$  removed is directly known by at least one other device in an extended family of devices  $n^{\text{th}}-1$  removed from the device connected to the common communication channels.

10. The computer readable medium of Claim 5, wherein for said at least one device in the family of related devices, the publication module publishes information via the common communication channels to those devices in the immediate family of said device who have subscribed to the information.

11. The computer readable medium of Claim 10, wherein for said at least one device, the publication module publishes information via the common communication channels to those devices in the extended family once removed from the device who have subscribed to the information.

12. The computer readable medium of Claim 11, wherein for said at least one device, the publication module publishes information via the common communication channels to those devices in the extended family twice removed from the device who have subscribed to the information.

13. The computer readable medium of Claim 11, wherein for said at least one device, the publication module publishes information via the common communications channels to those devices in the extended family n<sup>th</sup> removed from the device who have subscribed to the information.

14. The computer readable medium of Claim 1, wherein the publication module publishes only the most recent information to those devices in the family who have subscribed to the information.

15. The computer readable medium of Claim 1, wherein the publication module publishes only changed and new information to those devices in the family who have subscribed to the information.

16. The computer readable medium of Claim 5, wherein for said at least one device in the family of related devices, the subscription module enables the device to make a subscription to desired information stored by the related devices of the family in which the device is interested.

17. The computer readable medium of Claim 16, wherein the subscription identifies the subscribing device and the desired information.

18. The computer readable medium of Claim 17, wherein  
(a) if the desired information is stored in the subscribing device, the subscription module:

(i) makes the desired information available to the subscribing device; and

(ii) adds the subscription to a list of subscriptions for the desired information; and

(b) if the desired information is not stored in the subscribing device, the subscription module distributes the subscription to the immediate family of the subscribing device.

19. The computer readable medium of Claim 18, wherein

(a) if the desired information is stored in any of the devices in the immediate family, the subscription module:

(i) makes the desired information available to the subscribing device; and

(ii) adds the subscription to a list of subscriptions for the desired information; and

(b) if the desired information is not stored in a device in the immediate family, the subscription module distributes the subscription to the extended family once removed from the subscribing device.

20. The computer readable medium of Claim 19, wherein

(a) if the desired information is stored in any of the devices in the extended family  $n^{\text{th}}-1$  removed from the subscribing device, the subscription module:

(i) makes the desired information available to the subscribing device; and

(ii) adds the subscription to a list of subscriptions for the desired information; and

(b) if the desired information is not stored in a device in the extended family  $n^{\text{th}}-1$  removed from the subscribing device, the subscription module distributes the subscription to the extended family  $n^{\text{th}}$  removed from the subscribing device.